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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/154,930 09/17/98 STOUT

G 15225-003010

020350 QM02/0914
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76
EXAMINER

NGUYEN, T

ART UNIT PAPER NUMBER

3751 *8*

DATE MAILED:

09/14/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | |
|------------------------------|--------------------------------------|-------------------------------------|
| Office Action Summary | Application No. 09/154,930 | Applicant(s) Stout et al. |
| | Examiner Tuan Nguyen | Group Art Unit 3751 |

Responsive to communication(s) filed on Sep 17, 1998

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-42 is/are pending in the application.

Of the above, claim(s) none is/are withdrawn from consideration.

Claim(s) 41 and 42 is/are allowed.

Claim(s) 1-9, 11-29, and 31-40 is/are rejected.

Claim(s) 10 and 30 is/are objected to.

Claims 1-42 are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948. *Substitute*

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 5 & 6

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948 *Substitute*

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Serial Number: 09/154,930

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DETAILED ACTION

Election/Restriction

1. This application contains claims directed to the following patentably distinct species of the claimed invention:
 - Species I: Fig. 2,
 - Species II: Fig 7,
 - Species III: Fig. 8,
 - Species IV: Fig. 9, and
 - Species V: Fig. 10.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, none of the claims are considered generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Mr. Darin Gibby on September 2, 1999, a provisional election was made with traverse to prosecute the invention of Species V, claims 1-42. Affirmation of this election must be made by applicant in replying to this Office action. None of the claims are withdrawn from consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

4. Claims 1, 5, 7, 9, 11-16, 20-23, 31-35, and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Parks et al.

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In regard to claim 21, the Parks et al. reference discloses an apparatus (10) for transporting a fine powder comprising a hopper (18) having an opening (46, 58) therein, the hopper being adapted to receive the fine powder; at least one chamber (56) which is movable to allow the chamber to be placed in close proximity to the opening; a vibratable member (22) having a proximal end (top) and a distal end (bottom), the vibratable member being positionable within the hopper such that the distal end is near the opening; and a vibrator motor (26) to vibrate the vibratable member when within the fine powder. In regard to claim 22, the apparatus further comprising a mechanism (38, 34) for translating the vibratable member over the chamber. In regard to claim 23, the apparatus further comprising a rotatable (16) having a plurality of chambers (see col. 13, lines 7-10) about its periphery which are alignable with opening, and wherein the translating mechanism is configured to translate the vibratable member along the opening so that the vibratable member passes over each chamber. In regard to claim 31, the chamber is disposed within a rotatable member (16) which is placed in a first position having the chamber aligned with the opening, and a second position having the chamber aligned with a receptacle (12). In regard to claims 32-35, the chamber has a port in the bottom, wherein a filter (74) disposed across the port. The apparatus further comprising a vacuum source in communication with the port to assist in drawing the fine powder from the hopper and into the chamber, a source of compressed gas in communication with the port to eject the captured powder from the chamber and into the receptacle, and a controller for controlling actuation of the gas source and the vacuum source (see col. 11, lines 59-61). In regard to claim 40, the chamber

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is formed in a change tool (see col. 12, lines 20-21), and wherein the change tool is removably coupled to the rotatable member. In regard to claims 1, 7, 11-15 and 20, the method as claimed would be inherent. In regard to claim 9, the method of periodically leveling the powder within the hopper would be inherent due to agitation of (22). In regard to claim 16, the method of adjusting the amount of captured powder to be a unit dosage amount would be inherent due to a trimming member (66, 68).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4, 6, 8, and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. in view of Maki.

In regard to claims 25 and 26, although the apparatus of the Parks et al. reference does not include an ultrasonic horn, attention is directed to the Maki reference which discloses an analogous apparatus which further includes a powder agitation system comprises an ultrasonic horn (15, 16) which vibrates a vibratable element (14) in an up and down motion relative to a powder (12) at a frequency in the range from about 1,000 Hz to about 180,000 Hz. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention is made to

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replace the powder agitation system of Parks et al. with a powder agitation system as, for example, taught by Maki where in so doing would involve mere substitution of one functional equivalent powder agitation system for another and the selection on any of these known equivalent to agitate a powder within a hopper would perform equally well on the Parks et al. device. In regard to claim 27, although the Maki reference is silent of the diameter of the vibratable element (14) in the range from about 1.0 mm to about 10 mm, it is the Examiner's position that to design a vibratable element in the range from about 1.0 mm to about 10 mm (if not already) would involve mere design choice based on durability and desired vibration frequency that would be well within the realm of obviousness to one of ordinary skill in the art. In regard to claims 28 and 29, the Maki reference teaches an end member (17) at a distal end of the vibratable member (14), wherein the end member radially extends from the vibratable element. In regard to claims 2-4, 6 and 8, the method as claimed would be inherent.

7. Claims 18, 19, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. in view of Boesch et al.

In regard to claims 38 and 39, Although the apparatus of the Parks et al. reference does not include a secondary hopper having a shaking mechanism, attention is directed to the Boesch et al. reference which discloses an analogous apparatus which further includes a primary hopper (2) and a vibratory secondary hopper (1) for feeding a powder into a metering means via the primary hopper (see col. 2, line 32 et seq.). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention is made to employ, on the Parks et al. device, a vibratory

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secondary hopper as, for example, taught by Boesch et al. in order to feed powder into a metering chamber via a primary hopper. In regard to claims 18 and 19, the method as claimed would be inherent.

8. Claims 24 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al.

In regard to claim 24, Parks et al. teach a linear drive mechanism (34) which translates the vibratable member along the opening. Although the Parks et al. reference is silent of the rate of translation is less than about 100 cm/s, it is the Examiner's position that to translate a vibratable member at a rate less than about 100 cm/s (if not already) would involve mere design choice based on the profile of the cam (38) that would be well within the realm of obviousness to one of ordinary skill in the art.

In regard to claim 36, the Parks et al. reference discloses the apparatus as claimed except for a plurality of hoppers disposed above a plurality of rotatable members which each include a plurality of chambers, and a plurality of vibratable elements and a plurality of vibrators to vibrate the elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an apparatus comprising a plurality of hoppers disposed above a plurality of rotatable members which each include a plurality of chambers, and a plurality of vibratable elements and a plurality of vibrators to vibrate the elements, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

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9. Claims 1-6, 9, 12-17, 18-21, 25-29, and 31-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi et al. in view of Maki.

In regard to claims 21, 25 and 26, the Kawaguchi et al. reference discloses an apparatus for transporting a fine powder comprising a hopper (5) having an opening therein, the hopper being adapted to receive the fine powder; at least one chamber (11) which is movable to allow the chamber to be placed in close proximity to the opening; a stirrer (6) having a proximal end and a distal end, the stirrer member being positionable within the hopper such that the distal end is near the opening; and a motor to rotate the stirrer to agitate the fine powder. Although the apparatus of the Kawaguchi et al. reference does not include an ultrasonic horn, attention is directed to the Maki reference which discloses an analogous apparatus which further includes a powder agitation system comprises an ultrasonic horn (15, 16) which vibrates a vibratable element (14) in an up and down motion relative to a powder (12) at a frequency in the range from about 1,000 Hz to about 180,000 Hz. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention is made to replace the powder agitation system of Kawaguchi et al. with a powder agitation system as, for example, taught by Maki where in so doing would involve mere substitution of one functional equivalent powder agitation system for another and the selection on any of these known equivalent to agitate a powder within a hopper would perform equally well on the Kawaguchi et al. device.

In regard to claim 27, although the Maki reference is silent of the diameter of the vibratable element (14) in the range from about 1.0 mm to about 10 mm, it is the Examiner's

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position that to design a vibratable element in the range from about 1.0 mm to about 10 mm (if not already) would involve mere design choice based on durability and desired vibration frequency that would be well within the realm of obviousness to one of ordinary skill in the art.

In regard to claims 28 and 29, the Maki reference teaches an end member (17) at a distal end of the vibratable member (14), wherein the end member radially extends from the vibratable element.

In regard to claim 31, the chamber is disposed within a rotatable member (2) which is placed in a first position having the chamber aligned with the opening, and a second position having the chamber aligned with a receptacle (A).

In regard to claims 32-35, the chamber has a port in the bottom, wherein a filter (43) disposed across the port. The apparatus further comprising a vacuum source (via 46) in communication with the port to assist in drawing the fine powder from the hopper and into the chamber, a source of compressed gas (via 47) in communication with the port to eject the captured powder from the chamber and into the receptacle, and a controller (inherent) for controlling actuation of the gas source and the vacuum source.

In regard to claim 36, the Kawaguchi et al. reference discloses the apparatus as claimed except for a plurality of hoppers disposed above a plurality of rotatable members which each include a plurality of chambers, and a plurality of vibratable elements and a plurality of vibrators to vibrate the elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an apparatus comprising a plurality of hoppers disposed

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above a plurality of rotatable members which each include a plurality of chambers, and a plurality of vibratable elements and a plurality of vibrators to vibrate the elements, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. V. Bemis Co.*, 193 USPQ 8.

In regard to claim 37, Kawaguchi et al. teach plates (48, 52) disposed below the hopper wherein the chamber is movable relative to the plates to allow excess powder to be scraped from the chamber. Although the Kawaguchi et al. reference does not disclose a plate having aperture that is aligned with the chamber, it is the Examiner's position that to employ two plates below the hopper or a plate having aperture that is aligned with the chamber would involve mere design choice based on the desired amount of powder to be scraped from the chamber that would be well within the realm of obviousness to one of ordinary skill in the art. In regard to claim 17, the method as claimed would be inherent.

In regard to claim 38, the hopper is a primary hopper and further comprises a secondary hopper (1) above the primary hopper to transfer powder to the primary hopper. In regard to claim 39, the apparatus further comprises a shaking mechanism (4) to agitate or vibrate the secondary hopper. In regard to claim 40, the chamber is formed in a change tool (Fig. 10), and wherein the change tool is removably coupled to the rotatable member.

In regard to claims 1-6, 12-15 and 18-20, the method as claimed would be inherent. In regard to claim 9, the method of periodically leveling the powder within the hopper would be

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inherent due to rotation of stirrer (4). In regard to claim 16, the method of adjusting the amount of captured powder to be a unit dosage amount would be inherent due to a doctor blade (48).

Allowable Subject Matter

10. Claims 41 and 42 are allowed.
11. Claims 10 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuan Nguyen whose telephone number is (703) 306-9046. The examiner can normally be reached on Monday through Friday between 9:00 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Recla, can be reached on (703) 308-1382. The fax number for this Group is (703) 308-7766.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0858.

TN

September 13, 1999



Henry J. Recla
Supervisory Patent Examiner
Group 3700